

LISTING OF CLAIMS

Claims 1-43: (canceled)

44. (currently amended) A method for generating or increasing a cytotoxic T cell response against ~~an infectious agent or~~ a tumor cell comprising administering to an animal, including a human, a pharmaceutical composition comprising an enterobacterium OmpA protein, ~~or a fragment thereof~~ comprising the sequence as set forth in SEQ ID NO: 2, in combination with a tumor antigen.

45. (currently amended) The method of Claim 44, wherein the tumor antigen is pharmaceutical composition comprising the enterobacterium OmpA protein, ~~contains an antigen or a hapten specific for the infectious agent or~~ for the tumor cell.

46. (canceled)

47. (currently amended) The method of Claim 44, wherein the enterobacterium OmpA protein, ~~or a fragment thereof,~~ is obtained using a method of extraction from a culture of the enterobacterium.

48. (currently amended) The method of Claim 44, wherein the enterobacterium OmpA protein, ~~or a fragment thereof,~~ is obtained by recombination.

49. (currently amended) The method of Claim 44, wherein the enterobacterium is ~~Klebsiella pneumoniae~~ Klebsiella pneumoniae.

50. (canceled)

51. (currently amended) The method of Claim 45, wherein the antigen or hapten is selected from peptides, lipopeptides, polysaccharides, oligosaccharides, nucleic acids, lipids and any compound capable of specifically directing a CTL response against ~~an infectious agent or a tumor~~ cell.

52. (currently amended) The method of Claim 45, wherein the antigen or hapten is coupled to or mixed with the OmpA protein ~~or a fragment thereof~~.

53. (currently amended) The method of Claim 52, wherein the antigen or hapten is coupled~~[[,]]~~ by covalent attachment~~[[,]]~~ with the OmpA ~~Protein or a fragment thereof~~ protein.

54. (previously presented) The method of claim 53, wherein the coupling by covalent attachment is coupling produced by chemical synthesis.

55. (currently amended) The method of Claim 54, wherein one or more attachment elements is(are) introduced into the OmpA protein, ~~or a fragment thereof~~, and/or into the antigen or hapten, in order to facilitate the chemical coupling.

56. (previously presented) The method of Claim 55, wherein the attachment element introduced is an amino acid.

57. (currently amended) The method of Claim 53, wherein the coupling between the antigen or hapten and the OmpA protein, ~~or a fragment thereof~~, is produced by genetic recombination, wherein the antigen or hapten is a peptide in nature.

58. (withdrawn) The use of Claim 57, wherein the pharmaceutical composition comprises a nucleic acid construct encoding the hybrid protein.

59. (withdrawn) The use of Claim 58, wherein the nucleic acid construct is contained in a vector or in a transformed host cell capable of expressing the hybrid protein.

60. (currently amended) The method of Claim 44 wherein the pharmaceutical composition is administered in an effective amount to ~~eliminate infectious agents or~~ inhibit tumor growth.

61. (canceled)

62. (previously presented) The method of Claim 44 wherein the pharmaceutical composition is administered in an effective amount to prevent or treat cancers.

63. (previously presented) The method of Claim 62 wherein the pharmaceutical composition is administered in an effective amount to prevent or treat cancers associated with a tumor antigen.

64. (previously presented) The method of Claim 62 wherein the pharmaceutical composition is administered in an effective amount to prevent melanomas.

65. (previously presented) The method of Claim 44, wherein the pharmaceutical composition is vehicled in a form making it possible to improve its stability and/or its immunogenicity.

66. (currently amended) The method of Claim 65, wherein the vehicle is selected from:

- a liposome, and
- a viral vector containing a nucleic acid construct encoding the OmpA protein, ~~a fragment thereof, an antigen or hapten, or a hybrid protein, and~~
- ~~— a transformed host cell capable of expressing the OmpA protein, a fragment thereof, an antigen or hapten, or a hybrid protein.~~

67. (currently amended) The method of Claim ~~[[50]]~~ 44, wherein the amino acid sequence enterobacterium OmpA is encoded by ~~a nucleic acid construct or the nucleic acid construct contained in the vector or the transformed host cell comprises~~ a nucleic acid sequence ~~chosen from~~ of SEQ ID No. 1, ~~a fragment thereof having at least 15 consecutive nucleotides of SEQ ID No. 1, or a sequence having at least 80% homology with one of the sequences.~~

68. (withdrawn) A pharmaceutical composition, containing at least one enterobacterium OmpA protein or a fragment thereof, combined by mixing or by coupling, with at least one antigen or one hapten associated with, or specific for, a tumor cell, in a pharmaceutically-acceptable medium.

69. (withdrawn) The composition of Claim 68, wherein the enterobacterium OmpA protein, or a fragment thereof, is obtained using a method of extraction from a culture of the enterobacterium.

70. (withdrawn) The composition of Claim 68, wherein the enterobacterium OmpA protein, or a fragment thereof, is obtained by recombination.

71. (withdrawn) The composition of Claim 68, wherein the enterobacterium is *Klebsiella pneumoniae*.

72. (withdrawn) The composition of Claim 71, wherein the amino acid sequence of the OmpA protein, or a fragment thereof, is selected from:

- a) the amino acid sequence of SEQ ID No. 2;
- b) the amino acid sequence of a sequence having at least 80% homology with SEQ ID No. 2; and
- c) the amino acid sequence of a fragment of at least 5 amino acids of a sequence as defined in a).

73. (withdrawn) The composition of Claim 68, wherein the antigen or hapten is selected from peptides, lipopeptides, polysaccharides, oligosaccharides, nucleic acids, lipids and any compound capable of specifically directing a CTL response against the tumor cell.

74. (withdrawn) The composition of Claim 68, wherein the antigen or hapten is coupled, by covalent attachment, with the OmpA protein or a fragment thereof.

75. (withdrawn) The composition of Claim 74, wherein the coupling by covalent attachment is coupling produced by chemical synthesis.

76. (withdrawn) The composition of Claim 75, wherein one or more attachment elements is(are) introduced into the OmpA protein, or a fragment thereof, and/or into the antigen or hapten, in order to facilitate the chemical coupling.

77. (withdrawn) The composition of Claim 76, wherein the attachment element introduced is an amino acid.

78. (withdrawn) The composition of Claim 74, wherein the coupling between the antigen or hapten and the OmpA protein, or a fragment thereof, is produced by genetic recombination, wherein the antigen or hapten is a peptide in nature.

79. (withdrawn) The composition of Claim 75, wherein the pharmaceutical composition comprises a nucleic acid construct encoding the hybrid protein obtained after the coupling.

80. (withdrawn) The composition of Claim 79, wherein the nucleic acid construct is contained in a vector or in a transformed host cell capable of expressing the hybrid protein.

81. (withdrawn) The composition of Claim 79, wherein the nucleic acid construct comprises a nucleic acid sequence chosen from SEQ ID No. 1, a fragment thereof having at least 15 consecutive nucleotides of SEQ ID No. 1, or a sequence having at least 80% homology with SEQ ID No. 1.

82. (withdrawn) The composition of Claim 68, wherein the pharmaceutical composition is vehicled in a form which makes it possible to improve its stability and/or its immunogenicity.

83. (withdrawn) The composition of Claim 82, wherein the vehicle is selected from:

- a liposome,
- a viral vector containing a nucleic acid construct encoding the OmpA protein, a fragment thereof, an antigen or hapten, or a hybrid protein, and
- a transformed host cell capable of expressing the OmpA protein, a fragment thereof, an antigen or hapten, or a hybrid protein.

84. (withdrawn) The composition of Claim 68, wherein the pharmaceutically-acceptable medium consists of water, an aqueous saline solution, or an aqueous solution based on dextrose and/or on glycerol.

85 . (withdrawn) The composition of Claim 68, wherein the composition also contains a detergent.

86 . (withdrawn) The composition of Claim 68, without any other adjuvant for inducing a CTL response.